

# Delano Development Corporation

January 29, 1985

Mr. Steve Cox  
State of Utah  
Natural Resources  
Oil, Gas & Mining  
4241 State Office Bldg.  
Salt Lake City, UT 84114

*ACT/001/001*

**RECEIVED**

**FEB 01 1985**

**DIVISION OF OIL  
GAS & MINING**

Re: Request for Update of MR-1 Form for  
Sulphurdale Mine, ACT/001, Beaver  
County, Utah

Dear Mr. Cox:

This will update the Sulphurdale Mine and clarify the present owners of record. The predecessor company to FOMINCO is Delano Development Corporation which is owned by Thomas D. Canada, Katherine N. Canada and Gordon M. Ford. The owners of record are Thomas D. Canada and Katherine N. Canada.

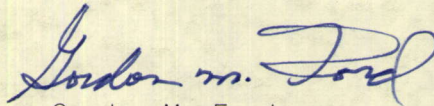
To date, we have some 24,000 acres of mining claims. Your old records showed 18,000 - 19,000 acres of mining claims. The sulphur production at Sulphurdale is still limited to the summer months. The Zeolites are being researched from a market standpoint only. At this time we have no immediate plans to open any of our potential mining properties. Therefore, I have only partially completed your Notice of Intention to Commence Mining Operations and Mining and Reclamation Plan.

I appreciate your assistance and your help in keeping us current with the necessary requirements of the State of Utah.

Enclosed please find three copies of our Annual Proof of Labor forms.

Sincerely,

DELANO DEVELOPMENT CORPORATION



Gordon M. Ford  
President

encl.



RECEIVED

FEB 01 1985

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING  
355 West North Temple  
3 Triad Center, Suite 350  
Salt Lake City, Utah 84180-1203  
Telephone: (801) 538-5340

DIVISION OF OIL  
GAS & MINING

NOTICE OF INTENTION TO COMMENCE MINING OPERATIONS  
and  
MINING AND RECLAMATION PLAN ✓

Based on Provisions of the Mined Land Reclamation Act, Title 40-8, Utah Code Annotated 1953, General Rules and Regulations and Rules of Practice and Procedures, By Order of the Board of Oil, Gas and Mining.

Mine Name: \_\_\_\_\_ Mine Plan Date: \_\_\_\_\_  
File No.: ACT/\_\_\_\_\_/\_\_\_\_\_ Date Received: \_\_\_\_\_  
Operator: \_\_\_\_\_ DOGM Lead Reviewer: \_\_\_\_\_  
Mineral(s) to be Mined: \_\_\_\_\_

Please attach other sheets as needed and include cross-reference page numbers when used.

1. Name of Applicant or Company: DELANO DEVELOPMENT CORPORATION  
Corporation (x) Partnership ( ) Individual ( )

2. Address: Permanent: No. 1 Sulphurdale, P. O. Box 1086  
Beaver, UT 84713  
Temporary: \_\_\_\_\_

3. Company Representative: Name: Gordon M. Ford  
Title: President  
Address: P. O. Box 1086, Beaver, UT 84713 Phone: 801/438-5569

4. Location of Operation: County(ies) Beaver & Millard  
Township(s): T-25-S Range(s): R-7-W Section(s): 13-24-35  
Township(s): T-25-S Range(s): R-6-W Section(s): 7-8-17-18-28-29-30-31  
Township(s): T-26-S Range(s): R-7-W Section(s): 1-2-11-12-13-14-24  
Township(s): T-26-S Range(s): R-6-W Section(s): 5-4-5-6-7-8-9-16-17-18

5. Owner(s) of record of the surface area within the land to be affected:

Name: <u>Thomas D &amp; Katherine N. Canada</u>	Address: <u>3390 Snoddy Rd., Bloomington, IN 47601</u>
Name: <u>BLM</u>	Address: <u>State of Utah</u>
Name: <u>Federal</u>	Address: <u>U. S. Government</u>
Name: <u>Taft Paxton</u>	Address: <u>Knosh, UT</u>



6. Owner(s) of record of the minerals to be mined:

Name:	Thomas D. & Katherine N. Canada	Address:	3390 Snoddy Rd. Bloomington, IN
Name:		Address:	
Name:		Address:	
Name:		Address:	

7. Owner(s) of record of all other minerals, including oil and gas, within any part of the land to be affected:

Name: Thomas D. & Katherine N. Canada Address: 3390 Snoddy Rd. Bloomington, IN  
Name: Address:  
Name: Address:

8. Have the above owners been notified in writing? (X) Yes, ( ) No. If no, why not?

9. Have you or any other person, partnership or corporation associated with you received an approval of a Notice of Intention to Commence Mining Operations by the State of Utah for operations other than described herein? ( ) Yes, (x) No. If yes, list all approval numbers now under surety:

10. Source of Operator's legal right to enter and conduct operations on the land to be covered by this Notice:

By purchase of FORMINCO, Inc. All rights and title to these described claims being some 24,000 acres more or less.

11. Give the names and mailing addresses of every principal Executive, Office, Partner (or person performing a similar function) of Applicant:

	Name	Title	Address
A.	Gordon M. Ford	President	P. O. Box 1086, Beaver, UT 84713
B.	Thomas D. Canada	Vice-President	" " "
C.	Katherine N. Canada	Vice-President-Chairman	" " "
D.	Patricia Ford	Corp. Secretary	" " "



12. Has the Applicant, any subsidiary or affiliate or any person, partnership, association, trust or corporation controlled by or under common control with the Applicant, or any person required to be identified by Item 11 ever had an approval of a Notice of Intention to Mine or Explore withdrawn or has surety relating thereto ever been forfeited? ( ) Yes, ( ) No.

If yes, please explain: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Please note: Section 40-8-13 of the Act provides that information relating to the location, size or nature of the deposit, and marked confidential by the Operator, shall be protected as confidential information by the Board and the Division and not be a matter of public record in the absence of a written release from the Operator, or until the mining operation has been terminated as provided in Subsection (2) of Section 40-8-21 of the Act. This material should be so marked and included on separate cross-referenced sheets.

13. All maps and plans prepared for submission shall be of adequate scale and detail to show topographic features and clearly indicate the following details:

- A. Location and delineation of the extent of the land previously affected, as well as the proposed surface disturbance.
- B. Existing active or inactive, underground or surface mined areas.
- C. Boundaries of surface properties, including ownership.
- D. Names and locations of:
  - (1) Lakes, rivers, streams, creeks and springs.
  - (2) Roads, highways and buildings.
  - (3) Active or abandoned facilities.
  - (4) Transmission lines within 500 feet of the exterior limits of land affected.
  - (5) Gas and/or oil pipelines.
  - (6) Site elevation.
- E. Drainage patterns of land affected:
  - (1) Overburden or topsoil removal and storage areas.
  - (2) Areas susceptible to erosion.
  - (3) Natural waterways.
  - (4) Constructed drainages, diversions, berms and sediment ponds (design calculations shall be included).
  - (5) Receiving waters (State Health classification).
  - (6) Directional flow of all surface waters (indicated by arrows).
- F. Known drill holes:
  - (1) Location.
  - (2) Status.



- (3) Depths and thicknesses of: \*
  - a. Water bearing strata.
  - b. Mineral deposits.
  - c. Toxic or potentially toxic materials.
  - d. Surficial or plant supporting material (topsoil and subsoil).
- G. Locations of disposal and stockpile areas:
  - (1) Topsoil and subsoil storage areas.
  - (2) Overburden storage area.
  - (3) Waste, tailings, rejected materials.
  - (4) Raw ore stockpile(s).
  - (5) Tailings-ponds and other sediment control structures.
  - (6) Discharge points, water effluents (see #15[D]).

All maps should have a color code or other suitable legend used in preparation to clearly indicate surface features of the land affected. A general reference map completed on a 7.5 (1:24,000) USGS quadrangle sheet is recommended with additional large scale maps included for practical delineation of individual facilities, (e.g., 1:200, 1:500).

14. Acreage to be disturbed:

- A. Minesite (operating, storage, disposal areas, etc.): \_\_\_\_\_
- B. Access/haul roads/conveyors: \_\_\_\_\_
- C. Associated on-site processing facilities: \_\_\_\_\_

15. Describe mining method to be employed, including:

- A. Mining sequence:
  - (1) Map delineating the yearly sequential disturbance (if surface mine) and/or surficial disturbance.
  - (2) Narrative (including on-site processing or mineral treatment):

---

---

---

---

---

---

---

Attach supplemental sheets and/or diagrams as necessary with cross reference to page number here: \_\_\_\_\_.

---

\*Stratigraphic or lithologic logs if correlated to footage depths may be presented when labeled (maps or logs should be labeled confidential, if so desired).



B. If sedimentary deposit seam(s):

(1) Thickness(es): \_\_\_\_\_

(2) Dip: \_\_\_\_\_

(3) Outcrop: \_\_\_\_\_

C. Will any underground workings or aquifers be encountered? ( ) Yes, ( ) No. If yes, describe potential impacts and protection measures to be taken: \_\_\_\_\_

D. Describe any active discharge or proposed discharge of water from mine or site area. Include water quality data and lab test reports. If attached sheets or reports are included, cross reference to page number here: \_\_\_\_\_

16. Have all necessary water rights been appropriated? ( ) Yes, ( ) No. How will water be obtained? Please explain: \_\_\_\_\_

17. Proposed or estimated duration of mining operation: \_\_\_\_\_  
Will the permit term be for a lesser amount of time, subject to review? (e.g., for surety estimate reasons). ( ) Yes, ( ) No. If yes, how long? \_\_\_\_\_

18. Describe the construction and maintenance of access roads including:

A. Procedures (drainage and erosion control methods).

B. Cross section(s).

C. Profile(s) of proposed road grade(s).

Attach supplemental diagrams and cross reference to page number here: \_\_\_\_\_.

19. Prior land use(s): \_\_\_\_\_

Current land use(s): \_\_\_\_\_

Possible projected or prospective future land use(s): \_\_\_\_\_



20. Describe methods of tree and brush removal: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Provide estimate of, and method of obtaining existing vegetation cover (%):

\_\_\_\_\_  
\_\_\_\_\_

What types of dominant vegetation are present? \_\_\_\_\_

\_\_\_\_\_

Photographs and/or maps may be attached to these forms, cross reference to page number here: \_\_\_\_\_.

21. Soils (surficial plant supportive material) and overburden: Except where slope or rocky terrain make it impossible, all surficial materials suitable as a growth medium shall be removed, segregated and stockpiled according to its ability to support vegetation (as determined by soil analysis and/or practical revegetation experience) prior to any major excavation. (Suggested minimum requirements are the top six inches, or the "A" horizon, whichever is larger.)

A. What is the pH range of the soil before mining? \_\_\_\_\_

Name of person or agency and method of determining pH: \_\_\_\_\_

Attach lab report if available. Cross reference page number here: \_\_\_\_\_.

B. Average depth of topsoil and subsoil to be stripped and stockpiled: \_\_\_\_\_.

Calculated volume of soil to be stockpiled: \_\_\_\_\_.

C. Describe the method for removing and stockpiling topsoil and subsoil, including measures to protect topsoil from wind and water erosion, compaction and pollutants: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

D. Describe the method for removing and stockpiling overburden. Describe and discuss the acidity or alkalinity (pH) or other characteristics which would affect revegetation: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_



- E. Rock subjected to processing such as waste rock, tailings, etc., and which is to be disposed of on- or off-site must be subjected to a toxicity analysis. The method of determination, results and suitable disposal methods must be explained in detail, including means for containment and long range stability\*: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

22. Describe the methods used to minimize public safety and welfare hazards during and after mining operations including:

- A. Shaft, tunnel and drill hole closure.
- B. Disposal of trash, scrap metal and wood and extraneous debris, waste oil and solvents, unusable buildings and foundations, sewage and other materials incident to mining.
- C. Posting of appropriate warning signs and/or fences or berms to act as barriers (e.g., above highwalls) in locations where public access is available.

---

\*"Toxic" means any chemical or biological or adverse characteristic of the material involved which could reasonably be expected to negatively affect ecological or hydrological systems or could be hazardous to the public safety and welfare.



23. Grading and soil redistribution.

- A. Attach pre- and postmining contour cross sections, typical of regrading designs. Cross reference to page number here: \_\_\_\_\_.
- B. Describe the method(s) of overburden replacement and stabilization and highwall elimination, including: (a) slope factors; (b) lift heights; (c) compaction; (d) terracing, etc., (e) also include testing procedures: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- C. What method of spreading topsoil and subsoil or upper horizon material on the regraded area will be employed? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
1. Indicate the approximate depth of soil cover after final surfacing \_\_\_\_\_ inches.
2. What tests will be performed to adequately evaluate the potential of the soil to successfully support intended revegetation? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. What soil amendments or fertilizers will be needed as an aid to revegetation?  
Type: \_\_\_\_\_ Rate: \_\_\_\_\_  
Type: \_\_\_\_\_ Rate: \_\_\_\_\_  
Type: \_\_\_\_\_ Rate: \_\_\_\_\_
4. What additional surface preparations will be used? Describe (a) drainage, erosion and sediment control measures; (b) maximum slope characteristics; and (c) highwall reclamation.



5. Describe methods which may be particularly applicable to waste disposal areas determined to be potential problem areas.

- D. Describe plans for either leaving or reclaiming the roads and pads associated with the operation.

24. Impoundments: All evaporation, tailings and sediment ponds; spoil piles, fills, pads and regraded areas shall be self-draining and nonimpounding when abandoned unless previously approved as an impounding facility by a lawful state or federal agency. In view of this, please describe the reclamation of all related areas in the operation and include pertinent items enumerated in C, 1-5 above.

25. Revegetation plans:

- A. What organization, agency or person will specifically be performing the revegetation? \_\_\_\_\_.
- B. Will the affected area be subject to livestock or wildlife grazing?  
( ) Yes, ( ) No. Will vegetation protection be needed to allow for a determination of the successful revegetation criteria outlined in the Mined Land Reclamation Act, Rule M-10(12)? ( ) Yes, ( ) No. If yes, what measures will the operator take? \_\_\_\_\_.
- C. Will irrigation be used? ( ) Yes, ( ) No. Type: \_\_\_\_\_.  
\_\_\_\_\_ . For how long? \_\_\_\_\_.



- D. Test plots initiated during the early stages of mine development provide good bases from which a successful revegetation program can be adapted for later implementation. Will test plots be employed? ( ) Yes, ( ) No. If yes, describe on an additional sheet(s) and attach. Cross reference page number here and show location on facilities map: \_\_\_\_\_.
- E. Please attach a revegetation plan and schedule including:
  - 1. Species to be used.
  - 2. Rate of seed application/acre.
  - 3. Season to be planted.
  - 4. Seedbed preparation techniques.
  - 5. Planting location, slope face direction, variability, method of application, covering, etc.
  - 6. Mulch and fertilizer application, if used.
- F. Describe any other maintenance procedures which may be used, if needed, to guarantee successful revegetation:

26. Please provide a reclamation schedule including:

- A. Estimated time for construction.
- B. Estimated time for interim reclamation.
- C. Estimated duration of the mining operation.
- D. A time table for the accomplishment of each major step in the reclamation plans. Attach the schedule and cross reference to the page number here: \_\_\_\_\_.

27. A surety guarantee must be provided for the mining operation (see Rule M-5 Mined Land Reclamation Act). In calculating this amount, the Division will consider the following major steps based on the information provided in this report:

- A. Clean up and removal of structures.
- B. Backfilling, grading and contouring.
- C. Topsoil and subsoil redistribution and stabilization.
- D. Revegetation (i.e., preparation, seeding, mulching, irrigation).
- E. Labor.
- F. Safety and fencing.
- G. Monitoring, and reseeding if necessary.

To assist the Division, the operator may attach a list of costs and factors which would satisfy these areas. Substantiation of these factors, i.e., unit costs and how they are derived, should accompany the list. Cross reference the page number here: \_\_\_\_\_.

28. A request for a variance from specific commitments to Rule M-10 (Reclamation Standards) of the Mined Land Reclamation Act may be submitted with adequate written justification. If after presentation of information adequately detailing the situation, a determination is made that finds a portion of the rule inapplicable, a variance may be granted by the Division.



I hereby commit the applicant to comply with Rule M-10, "Reclamation Standards" in its entirety, as adopted by the Board of Oil, Gas and Mining on March 22, 1978.

The applicant will achieve the reclamation standards for the following categories as outlined in Rule M-10 on all areas of land affected by this mine, unless a variance is granted in writing by the Division.

<u>Rule</u>	<u>Category of Commitment</u>	<u>Variance Requested?</u>
M-10(1)	Land Use	_____
M-10(2)	Public Safety and Welfare	_____
M-10(3)	Impoundments	_____
M-10(4)	Slopes	_____
M-10(5)	Highwalls	_____
M-10(6)	Toxic Materials	_____
M-10(7)	Roads and Pads	_____
M-10(8)	Drainages	_____
M-10(9)	Structures and Equipment	_____
M-10(10)	Shafts and Portals	_____
M-10(11)	Sediment Control	_____
M-10(12)	Revegetation	_____
M-10(13)	Dams	_____
M-10(14)	Soils	_____

I believe a variance is justified on a site-specific basis for the previous subsections of Rule M-10 as indicated. A narrative statement explaining these concerns is attached.

STATE OF \_\_\_\_\_

COUNTY OF \_\_\_\_\_

I, \_\_\_\_\_, having been duly sworn depose and attest that all of the representations contained in the foregoing application are true to the best of my knowledge; that I am authorized to complete and file this application on behalf of the Applicant and this application has been executed as required by law.

Signed: \_\_\_\_\_

Taken, subscribed and sworn to before me the undersigned authority in my said county, this \_\_\_\_\_ day of \_\_\_\_\_, 19\_\_\_\_.

Notary Public: \_\_\_\_\_

My Commission Expires: \_\_\_\_\_



PLEASE NOTE:

Section 40-8-13(2) of the Mined Land Reclamation Act provides for maintenance of confidentiality concerning certain portions of this report. Please check to see that any information desired to be held confidential is so labeled and included on separate sheets or maps.

Only information relating to the location, size or nature of the deposit may be protected as confidential.

Confidential Information Enclosed: ( ) Yes ( ) No



### MINE MAPS

1. Maps must be clear and legible contour maps or recent aerial photos. The scale should be 1 inch = 500 feet to adequately show topographic features.
2. Map sheets should be of a reasonable size, not to exceed 48 inches on a side.
3. Maps must have a title block with:
  - A. Map title.
  - B. Name and address of permittee.
  - C. Permit and amendment numbers.
  - D. Annual report period.
  - E. Scale, north arrow, contour interval, date of photography, etc.
4. All maps must show:
  - A. Legal subdivisions.
  - B. Permit area boundary clearly shown and labelled.
  - C. Amendment areas clearly shown and labelled.
  - D. Contour features.
5. The following features should all be clearly identified:
  - A. Topsoil stockpiles (numbered and with volumes).
  - B. Settling ponds and sediment control structures.
  - C. Haul roads.
  - D. Pits identified by location, name, number, etc.
  - E. Ramps (numbered).
  - F. Out-of-pit spoil dumps.
  - G. All waste disposal sites including, but not limited to:
    1. Landfill sites.
    2. Carbonaceous waste dumps.
  - H. Diversion ditches.
  - I. Monitoring sites.